

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/IB2005/050694

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61C8/00 A61B6/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61C A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 989 258 A (HATTORI) 23 November 1999 (1999-11-23) column 5, line 19 - column 6, line 21 column 6, line 65 - column 7, line 43	1-16
X	EP 0 231 838 A (FELDMUEHLE AG) 12 August 1987 (1987-08-12) column 2, line 28 - line 47 column 3, line 52 - column 4, line 43 figures	1,9,11, 12,15
A	US 5 208 845 A (GELB) 4 May 1993 (1993-05-04) the whole document	1,11,15

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

8 June 2005

Date of mailing of the international search report

21/06/2005

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Int: nal Application No
PCT/IB2005/050694

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5989258	A	23-11-1999	NONE	
EP 0231838	A	12-08-1987	DE 3602721 A1 EP 0231838 A2	20-08-1987 12-08-1987
US 5208845	A	04-05-1993	NONE	


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference O-2548	FOR FURTHER ACTION		See Form PCT/PEAA16
International application No. PCT/IB2005/050694	International filing date (<i>day/month/year</i>) 25.02.2005	Priority date (<i>day/month/year</i>) 25.02.2004	
International Patent Classification (IPC) or national classification and IPC INV. A61C8/00 A61B6/14			
Applicant DE CLERCK, René			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 7 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of 3 sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> <i>(sent to the International Bureau only)</i> a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).			
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application			
Date of submission of the demand 27.12.2005		Date of completion of this report 28.06.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer Raybould, B Telephone No. +31 70 340-2039	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/IB2005/050694

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-9 as originally filed

Claims, Numbers

1-16 as originally filed

Claims, Pages

1-17 received on 27.12.2005 with letter of 23.12.2005

Drawings, Sheets

1/1 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☒ the claims, Nos. 1-16
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/B2005/050694

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-9, 11, 13-15, 17
	No: Claims	1, 10, 12, 16
Inventive step (IS)	Yes: Claims	
	No: Claims	1-17
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1 The following reasoned statement has been made using the interpretations made in **Item VIII**, below.

2 Reference is made to the following documents:

D1: US-A-5 989 258 (HATER) 23 November 1999 (1999-11-23)

D2: EP-A-0 231 838 (FELDMUEHLE AG) 12 August 1987 (1987-08-12)

3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document D2 discloses (the references in parentheses applying to this document):

Method to determine the position of a dental implant (1) for mounting a dental prosthesis, whereby the implant is fixed in the bone of the jaw (see figure 3) of a person, whereby an image is formed of the jaw or of a reproduction model of this jaw by means of X-rays or magnetic resonance, which jaw is provided with the implant (1), whereby at least one marker element (4) which produces a strong contrast in imaging techniques is provided on said implant (1) in a detachable manner, whereby the position of the marker element (4) in relation to the jaw is determined on the basis of the image which is formed with said X-rays or via said magnetic resonance, and whereby the position of said implant (1) in relation to the jaw is then derived from the observed position of the marker element (4).

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 12 is not new in the sense of Article 33(2) PCT.

The document D2 discloses (the references in parentheses applying to this document):

Marker element for use in the method according to any one of the preceding claims, whereby this marker element (4) comprises at least a substance which produces a strong contrast in said image compared to the implant (1) itself and has means for being fixed in a detachable manner (see column 4, lines 13-20) to the implant (1) .

- 3.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 16 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D2 discloses (the references in parentheses applying to this document):

Support (3) with a marker element (4) for determining the position of a dental implant (1) which is fixed to the jaw (see figure 3) of a person, in relation to this jaw, whereby said marker element (4) produces a strong contrast in said image compared to said implant (1) itself.

The subject matter of claim 16 therefore differs from this known support with a marker element in that: the support has means to be fixed to the implant in a detachable manner.

The objective problem to be solved hereby may be regarded as how to readily remove the support from the implant. This problem differs fundamentally from the underlying problem throughout the application of determining the position of the dental implant in the jaw, which is uninfluenced by whether or not the support is

detachable from the implant. In any case, it is a standard design option in the field of dental implants to provide detachable supports for implants. The subject matter of claim 16 is therefore devoid of inventive step.

- 3.3 Dependent claims 2-11, 13-15 and 17 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1 and D2 and the corresponding passages cited in the search report.
- 3.4 Notwithstanding the above argumentation, although D1 refers to a surgical stent having marker elements (see column 7, lines 1-42) it is considered that substituting said surgical stent with an implant does not involve an inventive step and therefore D1 deprives all the claims of any inventive step.

Re Item VII

Certain defects in the international application

- 4 The closest prior art has not been identified as required by Rule 5(a)(ii) PCT.

Re Item VIII

Certain observations on the international application

- 5 The application does not meet the requirements of Article 6 PCT, because claim 12 is not clear.
- 5.1 In claim 12 protection is sought for a marker element by defining it in terms of its intended use instead of technical features necessary and sufficient to provide suitability for such use. It is not clear what structural limitations are implied by this intended use, contrary to the requirements of Rule 6.3 (b) ((I) and (ii)) PCT. The intended limitations are therefore not clear from this claim, contrary to the

requirements of Article 6 PCT. Specifically, claim 12 contains the functional terms:

".. to determine the position of an implant (2) which is fixed to the jaw (13) of a person, in relation to this jaw (13), whereby an image is formed of the jaw (13) or of a reproduction model of this jaw (13) with the implant (2) and with the marker element provided on said implant by means of X-rays or magnetic resonance.."

Furthermore, the introduction of the new passage "and with the marker element provided on said implant" is in itself intrinsically unclear, since it concerns an attempt to characterise the marker element in terms of its positional relationship with an implant which is fixed in a jaw, instead of in terms of its technical features, contrary to the requirements of Rule 6.3 (b) ((I) and (ii)) PCT. Claim 12 shall therefore be interpreted as follows:

Marker element for use in the method according to any one of the preceding claims, whereby this marker element (3,6) comprises at least a substance which produces a strong contrast in said image compared to the implant (2) itself and in that it has means for being fixed in a detachable manner to the implant (2).